

**ORDER**

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

7110.82B

7/20/88

SUBJ: MONITORING OF NAVIGATIONAL PERFORMANCE IN OCEANIC AREAS

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1. PURPOSE. This order establishes the procedures for the processing of Oceanic Navigational Error Reports (ONER) and collection of system data.
2. DISTRIBUTION. This order is distributed to selected offices in Washington headquarters, region headquarters, FAA Technical Center, the Mike Monroney Aeronautical Center, Flight Standards District Offices, General Aviation District Offices, Air Carrier District Offices, and Air Route Traffic Control Centers.
3. CANCELLATION. Order 7110.82A, Monitoring of Navigational Performance In Oceanic Areas, dated 11/8/84 is cancelled.
4. BACKGROUND. In any air traffic control environment there is a need to ensure that aircraft adhere to the centerline of the cleared route. Demonstrated navigational accuracy provides the basis for determining the lateral spacing and separation minima necessary with respect to traffic which may be operating outside but adjacent to the airspace protected for a given route. To sustain or refine the separation minima, adherence to a cleared route must be demonstrated. The best available measurement of such adherence is obtained by radar observation of each aircraft's proximity to centerline prior to its coming into coverage of short range navigational aids at the end of the oceanic navigated portion of the flight. If an observation indicates that an aircraft was not reasonably within airspace normally protected, the reasons for the apparent deviation from centerline must be determined and steps taken to prevent recurrence and to improve overall navigational performance.
5. PROCEDURES.
  - a. Air Traffic Operations Service
    - (1) Air Route Traffic Control Centers (ARTCC) controlling traffic within, exiting, or entering oceanic airspace shall:
      - (a) Radar monitor the progress of all aircraft entering or leaving oceanic airspace.

(b) If an aircraft is observed 20 NM or more from the centerline of the route on which it was cleared:

1 Notify the pilot of the observed position and distance off route and that an ONER will be filed.

2 Notify the appropriate operator for air carrier aircraft or the appropriate military office for military aircraft (see Appendix 2) of the observation and that an ONER will be filed. Notify the local military command office if required by a local agreement.

3 If time permits, ask the pilot if the aircraft is OMEGA equipped. If the aircraft is so equipped, ask the pilot to identify the appropriate OMEGA stations and any malfunction codes displayed.

4 Record the data for Items A through L of the ONER in accordance with Appendix 1.

5 Within 24 hours of the observation, transmit the ONER by routine telegraphic message in accordance with Appendix 3 to the offices indicated in Appendix 2.

(c) Ensure that radar controllers staffing oceanic sectors understand the importance of accurate observation and reporting of navigational errors and the significance of these reports on the verification and development of improved oceanic systems, separation standards, and procedures.

(2) Procedures Division, ATO-300, shall:

(a) Forward to the appropriate foreign office any ONER received on a foreign aircraft.

(b) Forward to AFS-200 and ACT-500 information received about U.S. aircraft deviations observed by foreign ATC units.

b. Office of Flight Standards

(1) Air Transportation Division, AFS-200, on receipt of an ONER, shall:

(a) Forward it to the appropriate regional flight standards division, if the aircraft is a U.S. air carrier.

(b) Forward it to the General Aviation Division, AFS-800, if the aircraft is a general aviation aircraft or operated under FAR Part 125.

(c) Forward it to the appropriate military office if the aircraft is U.S. military.

(d) Review the report submitted by the investigating region to determine if the finding for the deviation is correct and appropriate action was taken to prevent recurrence.

navigat: (e) Take action, as necessary, to prevent recurrence of errors.

(f) When appropriate, send the completed report to the North Atlantic Central Monitoring Agency.

(2) General Aviation Division, AFS-800, on receipt of an ONER, shall:

(a) Forward it to the appropriate regional flight standards division for investigation.

(b) Review the report submitted by the investigating region to determine if the finding for the deviation is correct and appropriate action was taken to prevent recurrence.

(c) Take action, as necessary, to prevent recurrence of navigational errors.

(d) Forward a copy of the completed ONER to AFS-200 within 30 days of initial notification.

(3) Regional Flight Standards Divisions, on receipt of an ONER, shall:

(a) Forward it to the appropriate Flight Standards Field Office for investigation.

(b) Forward to AFS-200 (Air Carrier) or AFS-800 (General Aviation/FAR Part 125) completed ONER's received from field offices after investigation.

(c) Take action, as necessary, to prevent recurrence of navigational errors.

(d) Coordinate followup action with the field office and AFS-200 or AFS-800, as necessary.

(4) Flight Standards Field Offices, on receipt of an ONER, shall:

(a) Contact the aircraft operator and conduct an investigation of the incident.

(b) Determine the cause and/or factors contributing to the deviation.

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(c) Complete items M through Q of the ONER. In the case of a report received in a different format (e.g. from a foreign ATC unit), convert the pertinent information to items A through L and complete items M through Q of the ONER.

(d) Take action as necessary to prevent recurrence of navigational errors.

(e) Forward the completed ONER to the regional flight standards division.

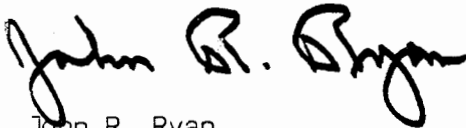
c. FAA Technical Center

Systems Division, ACT-500, shall:

(1) Maintain records of ONER's.

(2) Analyze ONER's and determine if the data indicates any significant changes in the navigational environment which may require corrective action.

(3) Provide data summaries and results of analyses to appropriate U.S. offices if corrective action is indicated and when otherwise requested.



John R. Ryan  
Director, Air Traffic  
Operations Service

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Appendix 1

APPENDIX 1. OCEANIC NAVIGATIONAL ERROR REPORT (RIS: AT 7110-1)

A REPORT NUMBER \_\_\_\_\_

B AIRCRAFT IDENTIFICATION AND TYPE \_\_\_\_\_

C DATE/TIME/MONTH OF OBSERVATION \_\_\_\_\_

D POINT OF DEPARTURE AND DESTINATION \_\_\_\_\_

E ASSIGNED ROUTE AND FLIGHT LEVEL \_\_\_\_\_

F DISTANCE AND DIRECTION FROM CENTERLINE \_\_\_\_\_

G DISTANCE AND DIRECTION FROM REFERENCE FIX \_\_\_\_\_

H TYPE OF LONG RANGE NAVIGATION EQUIPMENT IN USE \_\_\_\_\_

I PILOT ADVISED ATC OF DIFFICULTY \_\_\_\_\_

J ATC ADVISED PILOT OF OBSERVATION \_\_\_\_\_

K ATC ADVISED OPERATOR OF OBSERVATION \_\_\_\_\_

L REMARKS

M OPERATOR/CREW REMARKS

N CAUSE OF ERROR

O INVESTIGATOR'S COMMENTS

P CORRECTIVE ACTION INITIATED/RECOMMENDED

Q INVESTIGATING OFFICE DATE

INSTRUCTIONS - OCEANIC NAVIGATIONAL ERROR REPORT

Items A through L shall be completed by the observing ARTCC for telegraphic notification of appropriate offices. Items M through Q shall be completed by investigating offices.

A. REPORT NUMBER

Enter three-character facility designator, hyphen, last two digits of calendar year, hyphen, and sequential number of report, starting each new calendar year with number "1." Enter "N/A" for foreign-reported navigational errors.

Exs: ZOA-88-4  
N/A

B. AIRCRAFT IDENTIFICATION AND TYPE

Enter aircraft identification, slant, type aircraft.

Exs: UAL35/B747  
N12345/C182  
VV2456/P3

C. DATE/TIME/MONTH OF OBSERVATION

Enter UTC date-time group and abbreviated month.

Ex: 041201FEB

D. POINT OF DEPARTURE AND DESTINATION

Enter point of departure designator, slant, destination designator.

Exs: SFO/HNL  
EGLL/JFK

E. ASSIGNED ROUTE AND FLIGHT LEVEL

Enter route designator, airway, lat/long point to a fix, or lat/long to lat/long(whichever is the best description of the assigned route of the aircraft when entering or leaving oceanic airspace), slant, and last assigned en route flight level.

Exs: R465/380  
R220/350  
39N150W ZURIC/330  
40N130W 3830N128W/290

F. DISTANCE AND DIRECTION FROM CENTERLINE

Enter distance in nautical miles perpendicular to the intended route and the letter "R" for right of route or "L" for left of route.

Exs: 25R  
32L

G. DISTANCE AND DIRECTION FROM REFERENCE FIX

Enter distance in nautical miles from the oceanic exit or entry point or fix, the cardinal direction from that reference point, slant, and the reference point.

Exs: 60NW/CLUKK  
30S/ZIGIE  
40W/23N162W

H. TYPE OF NAVIGATIONAL EQUIPMENT

Enter type, slant, and number of units of each type of long range navigational equipment in use at the time of observation. If the aircraft is OMEGA equipped, enter the appropriate OMEGA stations and any malfunction codes displayed at time of the observed deviation, if available. If unable to acquire the type of navigational equipment, state "unknown."

Exs: OMEGA/1/STATIONS A,E,D/WARN LIGHT MALF CODE 12  
INS/2  
LORAN C/2  
Unknown

I. PILOT ADVISED ATC OF DIFFICULTY

Enter UTC time of advisory if pilot advised ATC of navigational difficulty or equipment failure while en route. Enter "none" if pilot does not give an advisory en route. Enter "post ob" if pilot advises of difficulty after being notified of observation. Enter pilot advisory in L, REMARKS, with statement of any special ATC action taken after advisory.

Exs: 1103Z  
None  
Post ob

J. ATC ADVISED PILOT OF OBSERVATION

Enter "yes" if ATC advised the pilot of the observed navigational error. Enter "no" if the advisory was not given and explain in L, REMARKS.

K. ATC ADVISED OPERATOR OF OBSERVATION

1. For air carrier aircraft, enter "TM" and the office notified if notified by telegraphic message (desired method). Enter "PHONE" and the office notified if notified by phone.

Exs: TM JAL OPS SFO  
PHONE PAA OPS JFK

2. For military aircraft, enter "TM" if the military was notified using a telegraphic message address in Appendix 2. Enter "PHONE" and the military command or office notified if notified by phone.

Exs: TM  
PHONE MAC CP HIK AFB

3. For general aviation aircraft, enter "N/A," since this advisory is not applicable.

L. REMARKS

Enter any other information or comments pertinent to the event that may assist investigation and analysis. (In the case of general aviation aircraft, include the pilot's name and home base.) Include explanations or data as noted in prior items above.

Exs: Pilot advised nav indicated on course  
Pilot advised INS indicators did not agree  
Pilot did not acknowledge notification  
Additional separation provided by ATC after Omega failure  
Radar separation provided from UAL96, B747 estimated BITTA  
at 1223Z FL370  
Pilot: John Smith, Byrd Field, Richmond, VA

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M. OPERATOR/CREW REMARKS

Enter any operator or crew comments that may identify factors that resulted in or contributed to the off-route observation.

N. CAUSE OF ERROR

Enter an indication of the most likely cause of the navigational error as the result of the investigation and the analyses.



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Appendix 1

O. INVESTIGATOR'S COMMENTS

Enter the investigator's findings and an analysis of the event. Include the number, manufacturer, and type of long range navigational equipment on board.

P. CORRECTIVE ACTION INITIATED/RECOMMENDED

Enter any action taken with reference to equipment, procedures, or personnel in the interest of prevention of recurrence and improvement of performance. Enter any recommendation for action reference authorization for operation in MNPS airspace, if pertinent.

Q. INVESTIGATING OFFICE

Enter field office designation and date of completion of report.



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Appendix 2

APPENDIX 2. NOTIFICATION LIST

	U.S. Aircraft			Foreign Aircraft		
	AC	GA	MIL	AC	GA	MIL
ATO-340 (FAA HDQTRS)				X	X	X
AFS-220 (FAA HDQTRS)	X	X	X	X		
AOR-120 (FAA Tech Center) (TTY-KACYAYX)	X	X	X	X	X	X
U.S. Air Force			X			
U.S. Navy/Marines			X			

MILITARY MESSAGE ADDRESSES

U.S. Air Force	RUEAHQA/HQ USAF/Washington DC//XOORF//
U.S. Navy/Marines	RUENAAA/CNO Washington DC (OP 554)

(For other military services, forward to AFS-220 for distribution)



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Appendix 3

APPENDIX 3. TELEGRAPHIC MESSAGE EXAMPLE

**TELEGRAPHIC MESSAGE**

NAME OF AGENCY		PRIORITY	SECURITY CLASSIFICATION
		ACTION	
		INFO.	
ACCOUNTING CLASSIFICATION	DATE PREPARED	FILE	
FOR INFORMATION CALL			
NAME	PHONE NUMBER	TYPE OF MESSAGE <input type="checkbox"/> SINGLE <input type="checkbox"/> BOOK <input type="checkbox"/> MULTIPLE ADDRESS	
THIS SPACE FOR USE OF COMMUNICATION UNIT			
MESSAGE TO BE TRANSMITTED (Use double spacing and all capital letters)			
<p><b>TO:</b></p> <p>OCEANIC NAVIGATIONAL ERROR REPORT (RIS: AT 7110-1)</p> <p>A ZOA-88-4</p> <p>B UAL35/B747</p> <p>C 041215JUL</p> <p>D HNL/SFO</p> <p>E R465/360</p> <p>F 25R</p> <p>G 75SW/CLUKK</p> <p>H INS/2</p> <p>I NONE</p> <p>J YES</p> <p>K PHONE UAL OPS SFO</p> <p>L PILOT ADVISED NAV SHOWED ON COURSE</p> <p>JENGO ZOA-590</p>			
		SECURITY CLASSIFICATION	
PAGE NO.	NO. OF PGS.		

STANDARD FORM 14  
REVISED 11-80  
GSA FPMR (41 CFR) 101-11.6

Form 7549-02-03-3048

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